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Correspondence Module

Brian Fusco
Dakota State University

CORRESPONDENCE MODULE

A graduate project submitted to Dakota State University in partial fulfillment of the requirements for the degree of

Master of Science

in

Information Systems

April, 2011

By

Brian Fusco

Project Committee:

Dr. Rick Christoph

Dr. Stephen Krebsbach

Michael Dayton

DAKOTA STATE
dsu
UNIVERSITY

PROJECT APPROVAL FORM

We certify that we have read this project and that, in our opinion, it is satisfactory in scope and quality as a project for the degree of Master of Science in Information Systems.

Student Name: Brian Fusco

Master's Project Title: Correspondence Module

Faculty supervisor: Dr. Rick Christoph Date: 3/29/2011

Rick Christoph

Committee member: Dr. Stephen Krebsbach Date: 3/29/2011

Committee member: Michael Dayton Date: 3/31/2011

Michael Dayton

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I would like to acknowledge the financial, academic and technical support of Dakota State University and its staff. Thanks to Jennifer Mees, Program Assistant Graduate Office for administrative support throughout my graduate studies cumulating to this MSIS project.

Thanks to my employer, WellCare Health Plans, for which this module was developed and implemented. I acknowledge that some of the information in this report and pre defined concepts come from my client organization. This information was derived from stakeholder interviews, corporate compliance business rules and IT technical meetings. These ideas are cited as external resources wherever they are referred. I would also like to thank my friends, colleagues and family for support and encouragement.

For any errors or inadequacies that may remain in this work, of course, the responsibility is entirely my own.

ABSTRACT

Project Definition

WellCare Health Plans, Inc. provides managed care services exclusively for government-sponsored health care programs focusing on Medicare and Medicaid. A 2008 Fortune 500 Company headquartered in Tampa, Florida, WellCare offers a variety of health plans for families, children, the aged, blind and disabled as well as prescription drug plans. The company employs more than 3,800 associates and services nearly 2.2 million members nationwide as of March 31, 2010.

WellCare Health Plans receives complaints, inquiries and informational correspondence from external regulatory agencies. Correspondence is received by letter, email messages, email attachments, phone calls, voice mail, fax and through other medium. Manual tracking of correspondence by paper is inefficient and inadequate in providing the organization with the ability to search and retrieve correspondence in a timely manner.

This project will provide the organization with a central repository for storing, tracking and notifying authorized users of correspondence with agencies and internal sources.

Scope

The scope of this project will include facilitating the storage, retrieval, tracking and notification to authorized users of correspondence. The business desire is that the application will continually be developed as the business grows.

Specific Items in Scope

- Provide a centralized repository to store all incoming and outgoing correspondence with agencies and internal sources.
- Allow authorized users to create and modify detail information pertaining to a correspondence.
- Provide a mechanism to notify authorized users of correspondence.
- Provide the ability to manage attachments pertaining to correspondence.
- Provide authorized users with a robust search capability to find correspondence.

Significance of Problem

The current business process for correspondence tracking is very labor intensive and informal. The method to manage the correspondence differs by region from using Excel spreadsheets to storing information about the correspondence in an access database. Some hard copy correspondence is scanned and stored in a folder on WellCare's network drive.

Solution

This project will design, develop and implement a module that will store, create detail information, retrieve, track and notify authorized users of incoming and outgoing correspondence with regulatory agencies.

The module will provide corporate oversight of all correspondence. Correspondence Module will assist in meeting compliance goals in line with our core value to deliver excellent service to our partners.

DECLARATION

I hereby certify that this project constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions or writings of another.

I declare that the project describes original work that has not previously been presented for the award of any other degree of any institution.

Signed,

Brian Fusco

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CHAPTER 1

INTRODUCTION

Background of the Problem

WellCare receives complaints, inquiries and informational correspondence from external regulatory agencies and internal sources. Correspondence is received by letter, email messages, email attachments, phone calls, voice mail, fax and through other medium.
The Correspondence module will store, create detail information, retrieve, track and notify authorized users of incoming and outgoing correspondence with regulatory agencies.

The current business process for correspondence tracking is very labor intensive and informal. WellCare Regional Regulatory Affairs receive complaints, inquiries and informational correspondence from agencies and internal sources. This information is received by letter, email messages, email attachments, phone calls, voice mail, facsimile, etc.

The method to manage the correspondence differs by region from using Excel spreadsheets to storing information about the correspondence in an Access database. Some hard copy correspondence is scanned and stored in a folder on WellCare's network drive. Complaints and inquiries are assigned to a WellCare regulatory specialist, who is tasked to research and resolve each matter and, when required, respond to the agency in a timely manner and disseminate information out to the company.

Statement of the problem

Manual tracking of correspondence by paper is inefficient and inadequate in providing the organization with the ability to search and retrieve correspondence in a timely manner. Compliance is required to gather information, respond back to agencies and disseminate new information out to the company.

There exists a business need to provide the organization with a central repository for storing, tracking and notifying authorized users of correspondence with agencies and internal sources.

Complaints and inquiries are assigned to a WellCare regulatory specialist. The specialist is tasked to research and resolve each matter and when required respond to the agency in a timely manner and disseminate information out to the company. The correspondence and supporting documents to resolve the issue are kept for reference, auditing and performance measurements

Objectives of the project

The Correspondence Module will store, create detail information, retrieve, track and notify authorized users of incoming and outgoing correspondence with regulatory agencies and internal sources. Through the tracking process the system will automatically build a log of all the organizations correspondence, a valuable resource for future inquiries and analysis.

The module will provide corporate oversight of all correspondence and will assist in meeting Compliance goals in line with our core value to deliver excellent service to our partners.

CHAPTER 2

LITERATURE REVIEW

2.1 Software Design

In designing any software application it is important to keep in mind the goal of software development defined as: "To develop quality software – on time and on budget – that meets the customers' real needs." (Leffingwell, Widrig, 2001). This standard is difficult to meet as stated in the Chaos Report (1995) by the Standish Group.

The report noted that the three most commonly cited factors that caused projects to be "challenged" were:

1. Lack of user input: 13 percent of all projects.
2. Incomplete requirements and specifications: 12 percent of all projects.
3. Changing requirements and specifications: 12 percent of all projects.

It appears at least one third of development projects run into trouble for reasons that are directly related to requirements gathering, requirements documentation, and requirements management.

Software Design Problems

The two largest problems, appearing in about half the responses, were

1. Requirements specifications.
2. Managing customer requirements.

Requirement errors are likely to consume 25 percent to 40 percent of the total project budget and are difficult to detect. [Boehm and Papaccio 1988]

By the time the requirements-oriented error is discovered the development team will have invested time and effort in building a design for those erroneous requirements (Leffingwell et al. (2003).

Such errors mean the design will have to be reworked. If with a small investment in a few skills we can do a better job in this area, we can save significant amounts of money, increase productivity, save precious time on the project calendar and ultimately deliver higher–quality results to the customer.

Project Success Factors

On the flip side, The Chaos Report (1995) by the Standish Group, notes three primary success factors for projects are:

1. User Involvement: 16 percent of all successful projects.
2. Executive management support: 14 percent of all successful projects.
3. Clear statement of requirements: 12 percent of all successful projects.

User and Developer

Understanding user and stakeholder needs moves us from the technical domain of bits and bytes, where many developers are most comfortable, into the domain of real people and real-world problems. Users and developers are typically from different worlds and have different backgrounds, motivations and objectives. This can be referred to as the "User and the Developer" syndrome. Table 1 both summarizes the reasons for this problem and suggests some solutions (Leffingwell et al. 2003).

Table 1: The "User and Developer" Syndrome

Problem	Solution
Users do not know what they want, or they know what they want but cannot articulate it.	Recognize and appreciate the user as a domain expert: try alternate communication and elicitation techniques.
Users think they know what they what until developers give them what they said they wanted.	Provide alternate elicitation techniques earlier: storyboarding, role playing, throwaway prototypes, and so on.
Analysts think they understand user problems better than users do.	Put the analyst in the users place. Try role playing for an hour or a day.
Everybody believes everybody else is politically motivated.	Yes, its part of human nature, so let's get on with the program.

The Correspondence Module project described in this report included user involvement throughout the process. One technique that was used in the Correspondence Module requirement gathering process was "storyboarding". Storyboarding tells a story to the user. and can consist of sketches, pictures, screen shots, PowerPoint presentations, or sample application screens. The analyst walks the user through the system using the storyboard (Leffingwell et al. (2003) while the user provides input during the process. This results in a clear statement of requirements.

WellCare Executive management supported the Correspondence Module project. These factors contributed to the successful implementation of the Correspondence Module.

2.2 Project Blastoff

The project blastoff is the short burst of activity that puts together all the pieces that are necessary to get your product off to a flying start and to ensure that you project is viable and well founded (Robertson, Suzanne & Robertson James 1999). The blastoff identifies the work that the product is to become a part of, and determines the purpose that the product is to fulfill.

Product Purpose

The product purpose describes the reason for building the product – what will this product do that will help our work? The Correspondence Module had a well defined product purpose, to design, develop and implement a module that will store, create detail information, retrieve, track and notify authorized users of incoming and outgoing correspondence with regulatory agencies. The product purpose is the highest level customer requirement and will be used to test all requirements. The goal or purpose of the product not only solves a problem but also provides a business advantage (Robertson et al 1999).

Users and Stakeholders

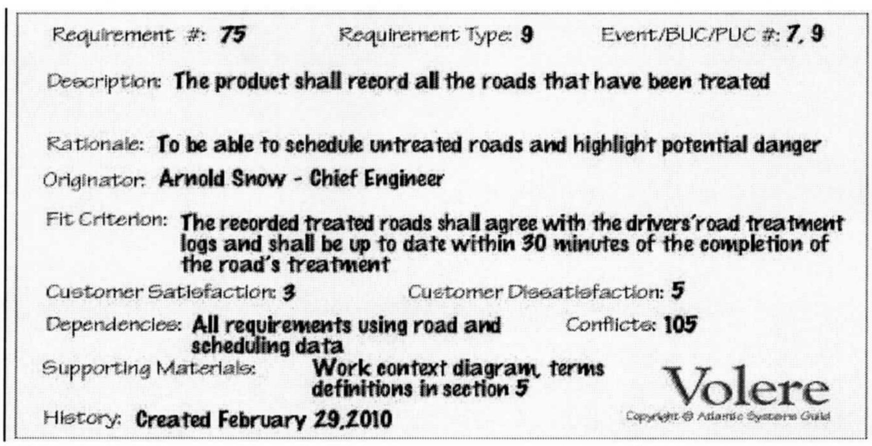
Users are the people who will ultimately operate your product. For in-house products, they are usually the people who work for your client. For external products, the user and customer may be the same. The purpose of identifying the users is so that you can understand the work they do. After all, the product is intended to help with this work. You also have to know their characteristics so that you can write the correct usability requirements. You have to build a product that these people can and will use. The more you know about them the better the chance you have of building a suitable product. (Robertson et al 1999).

Stakeholders are people who have an interest in your product and have some demand on the product and therefore must be consulted in the requirement gathering activity. It is critical to identify the stakeholders and inform them that they are stakeholders and that you will be consulting them about requirements for the product. The greatest problem concerning stakeholders is the requirements that you miss if you do not find all the stakeholders, or you do not include stakeholders in the requirements gathering process.

Volere Requirement Template

The Volere Requirement Template can be used as 5" by 8" cards, printed with the shell components in Figure 1. These can be used for initial requirement gathering. Each of the components contributes to the understanding and testability of the requirement. (Robertson et al 1999)

Figure 1: Volere Requirement Template


Requirement #: 75 Requirement Type: 9 Event/BUC/PUC #: 7, 9

Description: The product shall record all the roads that have been treated

Rationale: To be able to schedule untreated roads and highlight potential danger

Originator: Arnold Snow - Chief Engineer

Fit Criterion: The recorded treated roads shall agree with the drivers'road treatment logs and shall be up to date within 30 minutes of the completion of the road's treatment

Customer Satisfaction: 3 Customer Dissatisfaction: 5

Dependencies: All requirements using road and scheduling data Conflicts: 105

Supporting Materials: Work context diagram, terms definitions in section 5

History: Created February 29,2010

Volere

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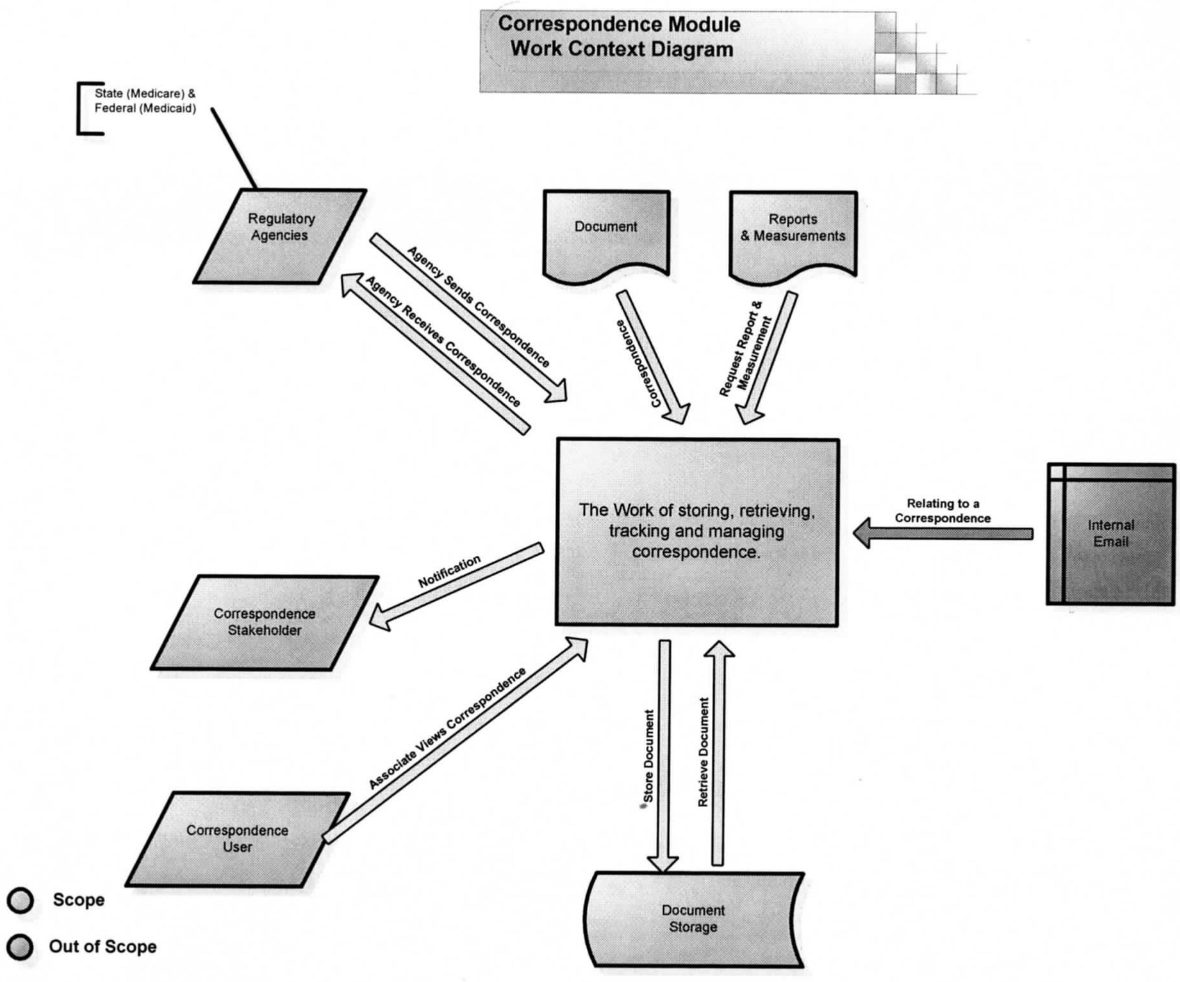
Work Context

The work context diagram identifies the boundary of the work that we intend to study (Robertson et al 1999).

Figure 2: Correspondence Module Work Context diagram shows the work as a single, as yet uninvestigated entity, surrounded by the adjacent systems. The named arrows represent data that flows between the work and the adjacent systems. The adjacent systems are the representatives of the domains.

Figure 2: Correspondence Module Work Context



2.3 Data Modeling

During the design of the Correspondence Module, business rules were formulated to express business policy. A "business rule" is a statement that defines or constraints some aspect of the business. The concept of business rules have been used in information systems for some time. However, it has been more common to use the related term "integrity constraint" when referring to such rules. These rules can be expressed in terms that are familiar to end users. (Hoffer, Jeffrey , Prescott, Mary & Topi, Heikki 2009)

Entity-relationship model (E-R model)

An entity-relationship model (E-R model) is a detailed graphical representation of entities and their relationships to each other, typically used in computing in regard to the organization of data within databases or information systems. The E-R model is expressed as an entity-relationship diagram (E-R diagram, or ERD).

Entity

An entity is a person, place, thing or event for which data is collected and maintained. For example, a library system may contain data about different entities like BOOK and MEMBER. (Hoffer et al 2009)

Entity instance

An entity instance is a single occurrence of an entity type. Figure 3 illustrates the distinction between an entity type and two of its instances in the Correspondence Module database. The table illustrated is Correspondence Details.

Figure 3: Entity type: CORRESPONDENCE_DETAILS				
Attributes	Attribute Data Type	Required or Optional	Example Instance	Example Instance
Receipt Date	DATETIME	Required	1/1/2011 12:00	1/2/2011 13:00
State	CHAR(30)	Required	Florida	Georgia
Region	CHAR(50)	Required	Corporate	SIU
Classification	CHAR(50)	Required	CMS	Administrative
Subclassification	CHAR(50)	Required	Letter of Concern	Information
Medium	CHAR(30)	Required	Fax	email
Summary	VARCHAR(MAX)	Optional	This is a test Correspondence entered by Brian Fusco	Test the input screen for validation

Attributes: An attribute is a property or characteristic of an entity type.

Relationship type: A relationship type is a meaningful association between entity types.

Relationship instance: A relationship instance is an association between entity instances.

2.4 Web Site Design

Web Site Organization

How WellCare stakeholders and users move around the Correspondence Module was an important consideration in the design of the user interface. Prior to development, a site map or storyboard of the proposed Correspondence user interface was created to define organization and flow of pages.

Typically there are three types of Web Site Organization.

- Hierarchical
- Linear
- Random

A Hierarchical approach has a clearly defined home page with links to major site sections. However there are pitfalls with this type of design to consider. It is important to stay clear of two many major site selections. This can confuse and frustrate the user. Another pitfall is two many levels to get the information required (Terry Felke-Morros, 2007). The design should organize the site with minimum page clicks. The three-click rule is when a user is able to get from any page on the site to any other page with a maximum of three clicks.

The Linear approach to Web Site design is used when one page is viewed after another in a sequential fashion. The Linear approach is good for tutorials. The Random approach is when there is no clear path through the site. The Correspondence Module uses a Hierarchical approach with tabs to provide the user with a seamless navigation flow throughout the application.

2.5 Database Systems

Web-DBMS Approach.

The Web as a platform for database systems can deliver innovative solutions for both inter- and intra-company business operations. The advantages of the Web-DBMS approach are listed in Table 2: Advantages of the Web-DBMS approach. (Connolly, Begg, 2005)

Table 2: Advantages of the Web-DBMS approach

Advantage
Simplicity
Platform independence
Graphical User Interface
Standardization
Cross-platform support
Transparent network access
Scalable deployment
Innovation

Simplicity

- The HTML page has no overly complex functionality. However, HTML is continually extended, so the original simplicity has arguably disappeared.

Platform independence

- Web clients are mostly platform-independent.

Graphical User Interface

- A good GUI can simplify and improve database access.

Standardization

- Using HTML, developers learn a single language and end-users use a single GUI.

Cross-platform support

- Web browsers are available for virtually every type of computer platform. This cross-platform support allows users on most types of computers to access a database from anywhere in the world.

Transparent network access

- A major benefit of the Web is that network access is essentially transparent to the user, except for the specification of a URL, handled entirely by the Web browser and the Web server (Connolly et al 2005)

Scalable deployment

- The more traditional two-tier client-server architecture produces “fat” clients that inefficiently process both the user interface ant the application logic. In contrast, a Web-based solution tends to create a more natural three-tier architecture that provides a foundation for scalability.

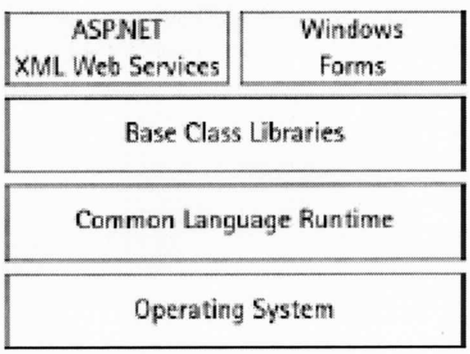
Innovation

- As an Internet platform, the Web enables organizations to provide new services and reach new customers through globally accessible applications (Connolly et al 2005).

Microsoft Web Platform

The Microsoft .NET Framework is a platform for building, deploying, and running Web Services and applications. It provides a highly productive, standards-based, multi-language environment for integrating existing investments with next-generation applications and services as well as the agility to solve the challenges of deployment and operation of Internet-scale applications. The .NET Framework, Figure 4, consists of three main parts: the common language runtime, a hierarchical set of unified class libraries, and a componentized version of Active Server Pages called ASP.NET (Microsoft Corporation 2001).

Figure 4. The .NET Framework Environment



The Correspondence Module utilizes Microsoft .NET technology using Visual Studio to build the Web Pages.

2.6 Successful Meetings

The System Design Life Cycle for the Correspondence Module involved effective meeting management.

A meeting has specific content and a purpose that determines who should attend, what needs to be discussed, and how the information is presented (Henkel, Shri, 2007). To plan an effective meeting, you need to understand the elements that your meeting needs. A simple checklist shown in Table 3: Meeting Planning Worksheet will assist you in planning effective meetings.

Table 3: Meeting Planning Worksheet

Meeting Planning Worksheet
Objective
What do you want and need to accomplish in the meeting?
Meeting Length
How long does you meeting need to be?
When should it be held?
What day and time would be best?
Attendees
Who needs to be included? Include people in authority, people committed to finding a solution, and people who need to know the information.
Agenda
What individual things will be discussed or presented?
Who will plan the agenda?
Who will distribute the agenda?
Will participants contribute to the agenda?
Meeting Location
Where will the meeting be held?
What equipment will be needed?
What type of layout would be best for your meeting?
Individual Roles
What roles will attendees play in the meeting? This includes: facilitator, recorder, secretary, and speaker.
Follow-up
How will you gather feedback from attendees?
How will you evaluate the effectiveness and success of your meeting?

Meeting Logistics

Logistical planning is important for meetings, especially larger ones. Do not get caught thinking that someone else is handling it. You need to know who is handling it and ensure that everything is ready in time for the meeting. Effective meetings and good logistics do not just happen. They are a result of careful planning (Henkel, Shri, 2007).

Before the Meeting Ends

- What needs to be done?

Be specific about what you want to do. The more specific instructions are, the less possibility of confusion. Some of these things could include additional research and information, finding or requesting additional funding, writing a proposal, hiring or bringing in additional people, or actually starting a project.

- When does it need to be done?

It is good to set a realistic timetable. Within the time table, there should be checkpoints or goals to be reached to keep the team motivated and indicate progress is being made. Include information about how the timeline will be handled and monitored.

- Who will be responsible?

Assign each part of the action plan to someone before adjourning the meeting. Attendees can be volunteers or the meeting leader can handpick people if needed. Assignees need to agree to the terms for the projects.

2.7 Data Mining

The WellCare Correspondence Module will be the central repository for correspondence. This will provide WellCare with a database that can be mined to trend and forecast.

"Data mining will become much more important, and companies will throw away nothing about their customers because it will be so valuable. If you're not doing this, you're out of business." Dr. Penzias, ComputerWorld, January 1999

In business, there are clear reasons for investing in data mining. If data mining can provide actionable results that improve business processes, then data mining is a competitive weapon (Groth, Robert 1999). Table 4 examines three clear cases where data mining can directly affect a company's profitability.

Table 4: How Data Mining Affects Various Companies	
Data Mining in Retail	
Business Problem	Increase response rates on direct-mail campaigns.
Solution	Through data mining, marketers build predictive models that indicate who will most likely respond to a direct-mail campaign.
Benefit	Increase revenues by targeting campaigns to the right audience.
Data Mining in Insurance	
Business Problem	Decrease number of fraudulent claims.
Solution	Through data mining, marketers build predictive models that identify those claims that are most likely fraudulent.
Benefit	Increase profits by reducing cost.
Data Mining in Financial Markets	
Business Problem	Improve ability to predict the likely fluctuations in the market.
Solution	Through data mining, financial analyst build predictive models that identify patterns that have historically caused market fluctuations.
Benefit	Increase revenues by investing more intelligently.

Data mining software analyzes relationships and patterns in stored transaction data based on open-ended user queries. Several types of analytical software are available: statistical, machine learning, and neural networks. Generally, any of four types of relationships are sought (Stahl, Jason 2006):

- Classes: Stored data is used to locate data in predetermined groups. For example, a restaurant chain could mine customer purchase data to determine when customers visit and what they typically order. This information could be used to increase traffic by having daily specials.

- Clusters: Data items are grouped according to logical relationships or consumer preferences. For example, data can be mined to identify market segments or consumer affinities.

- Associations: Data can be mined to identify associations. The beer-diaper example is an example of associative mining.

- Sequential patterns: Data is mined to anticipate behavior patterns and trends. For example, an outdoor equipment retailer could predict the likelihood of a backpack being purchased based on a consumer's purchase of sleeping bags and hiking shoes.

Data mining consists of five major elements:

- Extract, transform, and load transaction data onto the data warehouse system.
- Store and manage the data in a multidimensional database system.
- Provide data access to business analysts and information technology professionals.
- Analyze the data by application software.

The Correspondence Module will use data mining by providing senior management with key metrics. Using Cognos Report Studio and Framework developers will design and build a Corporate Dashboard that will assist in predicting trends based on the types and classifications of correspondence entered into the system.

CHAPTER 3

SYSTEM DESIGN (RESEARCH METHODOLOGY)

Systems are created to solve problems. The systems design methodology is an organized way of dealing with a problem. The System Design (Research Methodology) section describes the system requirements, operating environment, system and subsystem architecture, files and database design, input formats, output layouts, human-machine interfaces, detailed design, processing logic, and external interfaces.

The objective of the systems design and analysis phase is to define the specification of what the system needs to do to meet the requirements of end users. In this phase such specifications are converted to a hierarchy of charts, tables and figures that define the data required and the processes. These components make up the system that will meet the technical and business requirements.

Table 5: Hardware Configuration	
Requirement	Hardware
Description	Table 5 lists the Hardware Configuration used for the Correspondence Module

Table 5: Hardware Configuration

Item	Qty	Processor	CPU	Memory	Storage
LSADBDEV Development Database Server	1	AMD Operon 2425	2.6 Ghz Six-Core	2048 MB	100 GB
LSADBAPP Development Application Server	1	AMD Operon 2425	2.6 Ghz Six-Core	2000 MB	32 GB
LSADB Production Database Server	1	AMD Operon 2435	Dual 2.6 Ghz Six-Core	4096 MB	100 GB
LSAAPP Production Application Server	1	AMD Operon 2425	2.6 Ghz Six-Core	2000 MB	32 GB

Table 6: Software Configuration	
Requirement	Software
Description	Table 6 lists the Software Configuration used for the Correspondence Module

Table 6: Software Configuration

Item	Configuration
Microsoft SQL Server	2005 Edition
Microsoft Visual Studio	2005 Edition
Windows Server	2003 R2 Standard x64 Edition
Erwin	Business Tool

Figure 5: Development Application Environment	
Development Application Server	LSASPPDEV is the development server used for the Correspondence Module.
Development Web Site	LIONSDEVCORR is the development web site used for the Correspondence Module.

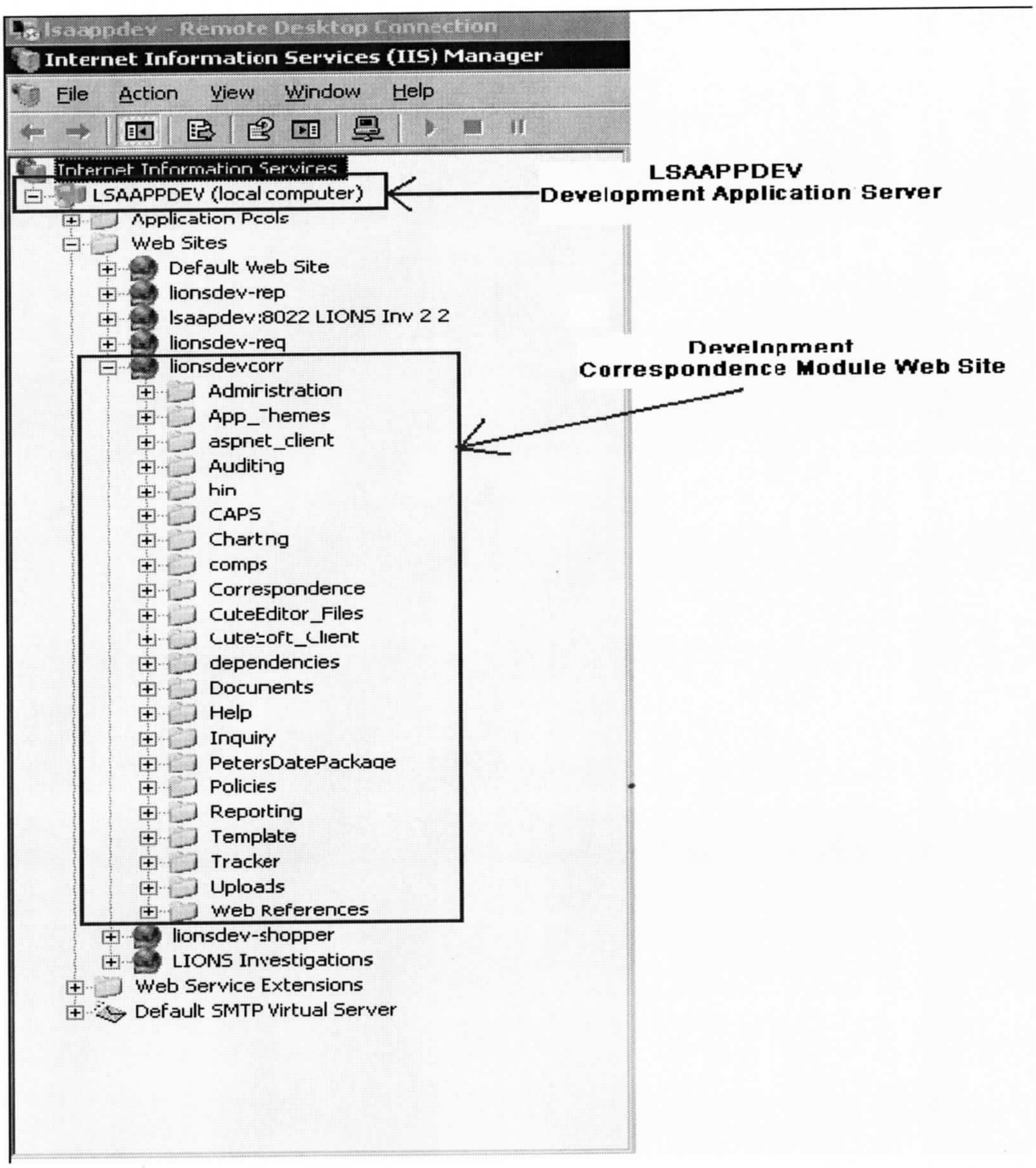


Figure 6: Development Database Environment	
Development Database Server	LSADBDEV is the development database server used for the Correspondence Module.
Development Database	LIONS_Correspondence is the development database used for the Correspondence Module.

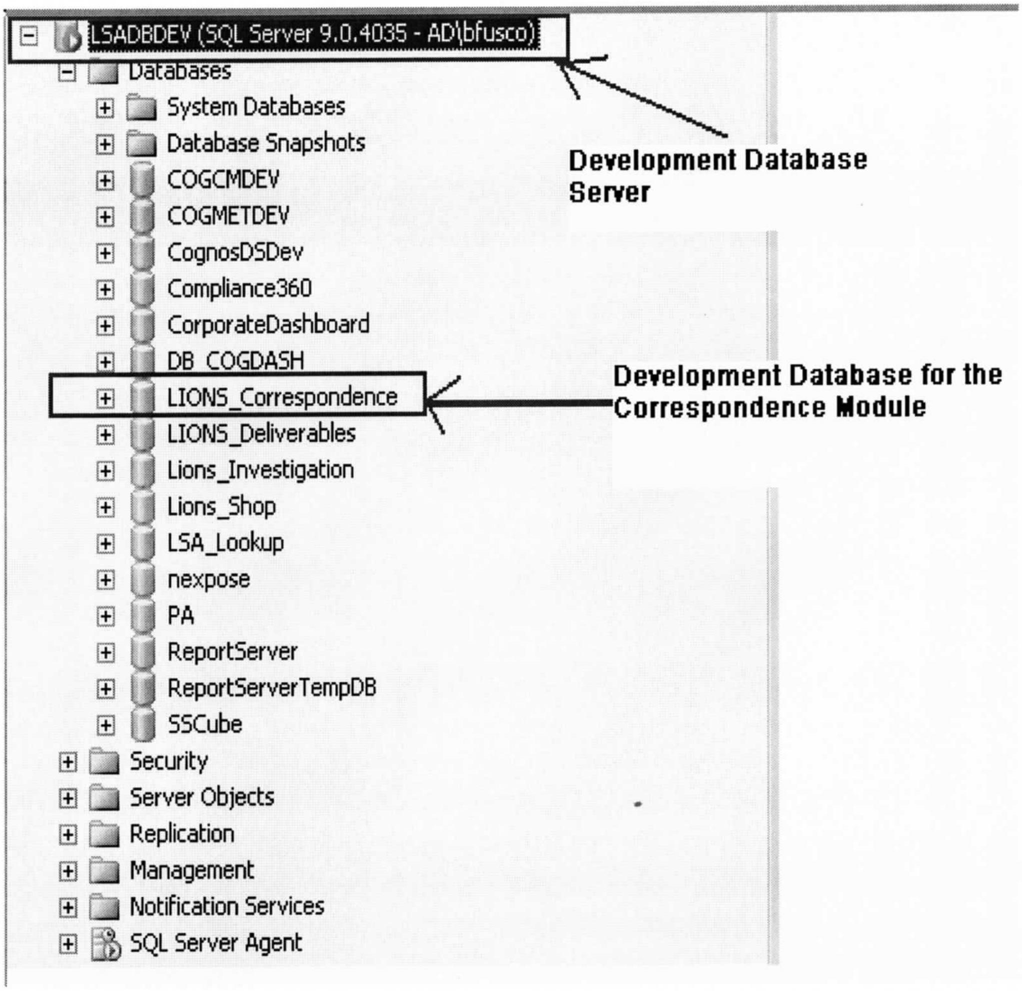


Figure 7: Production Application Environment	
Production Application Server	LSASPP is the production server used for the Correspondence Module.
Production Web Site	LSA_Correspondence is the production web site used for the Correspondence Module

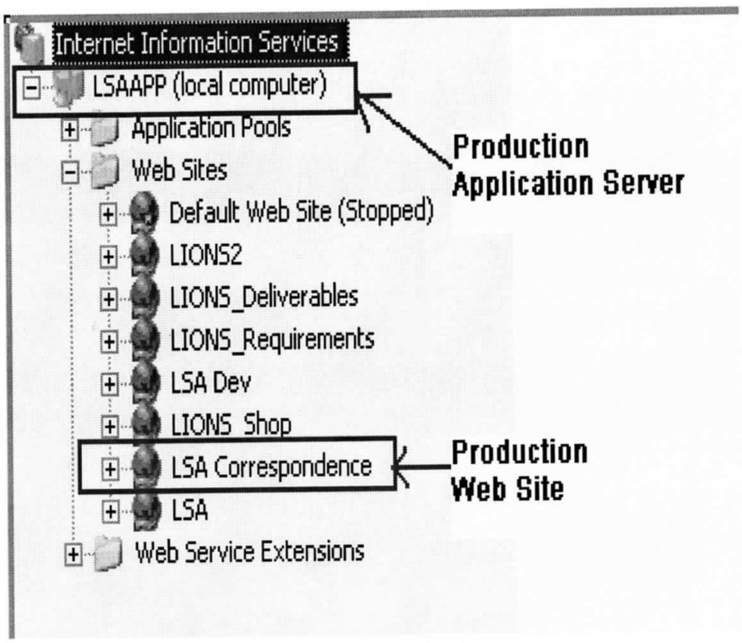


Figure 8: Production Database Environment	
Production Database Server	LSADB is the production database server used for the Correspondence Module.
Production Database	LIONS_Correspondence is the development database used for the Correspondence Module.

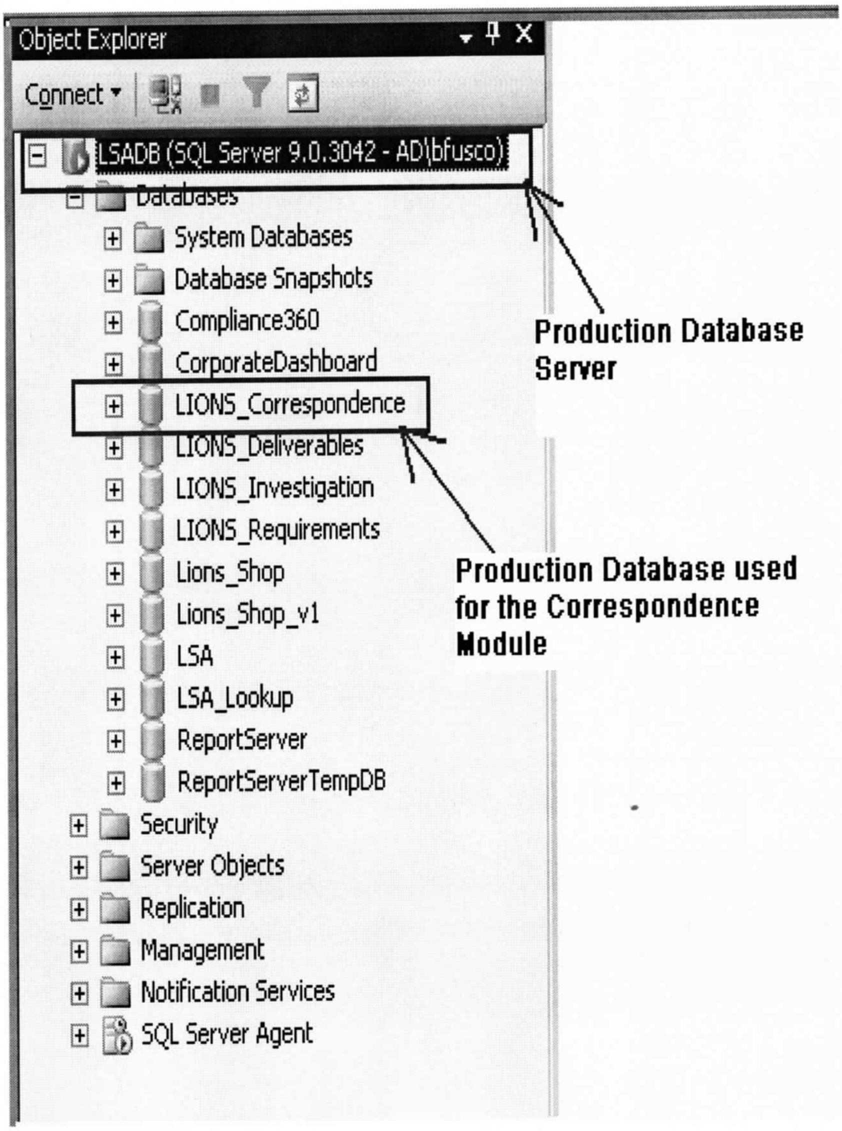


Figure 9: Correspondence Module Screen Flow	
Requirement	Screen Flow and Navigation
Description	Figure x depicts the Correspondence Module Screen Flow and Page Navigation.

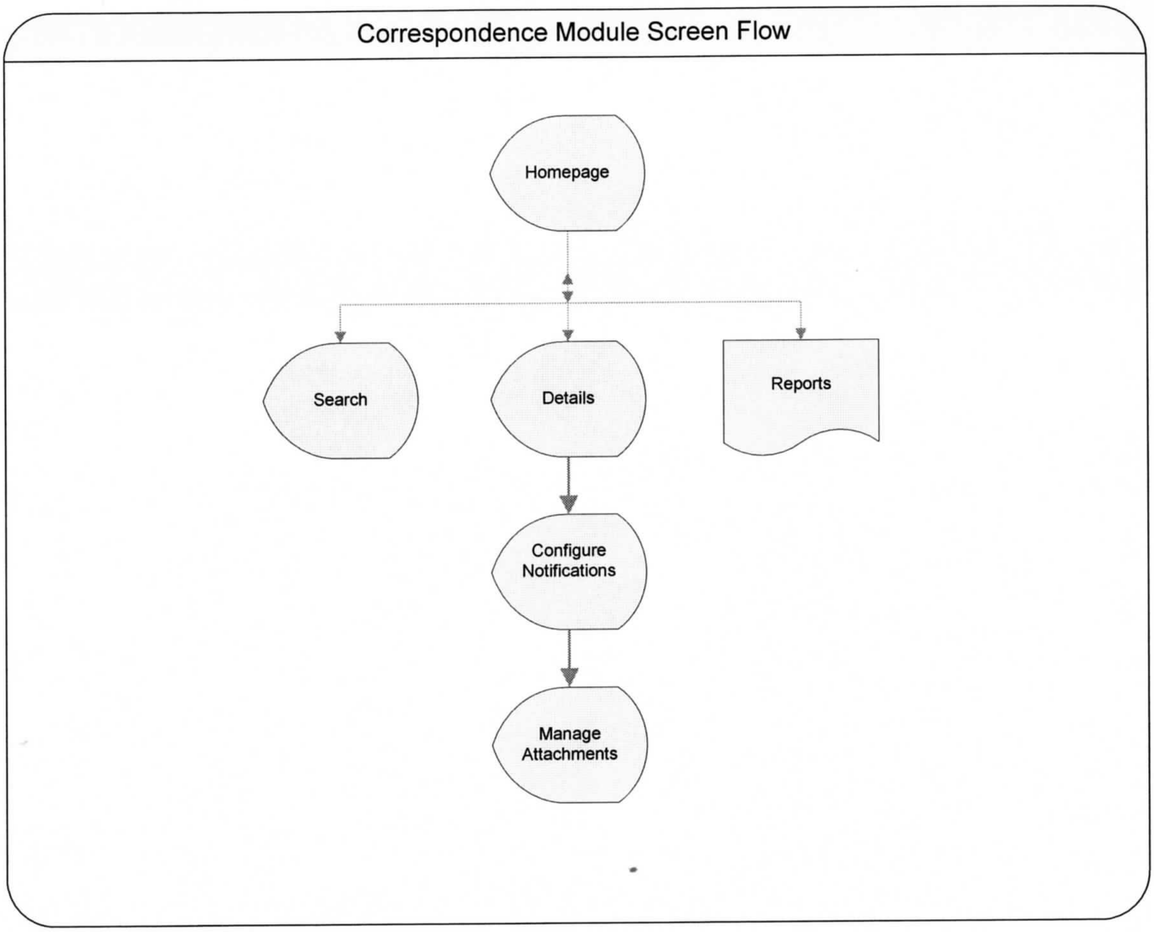


Figure 10: Correspondence Home Page	
Requirement	Correspondence Home Page
Description	Home page for the Correspondence Module

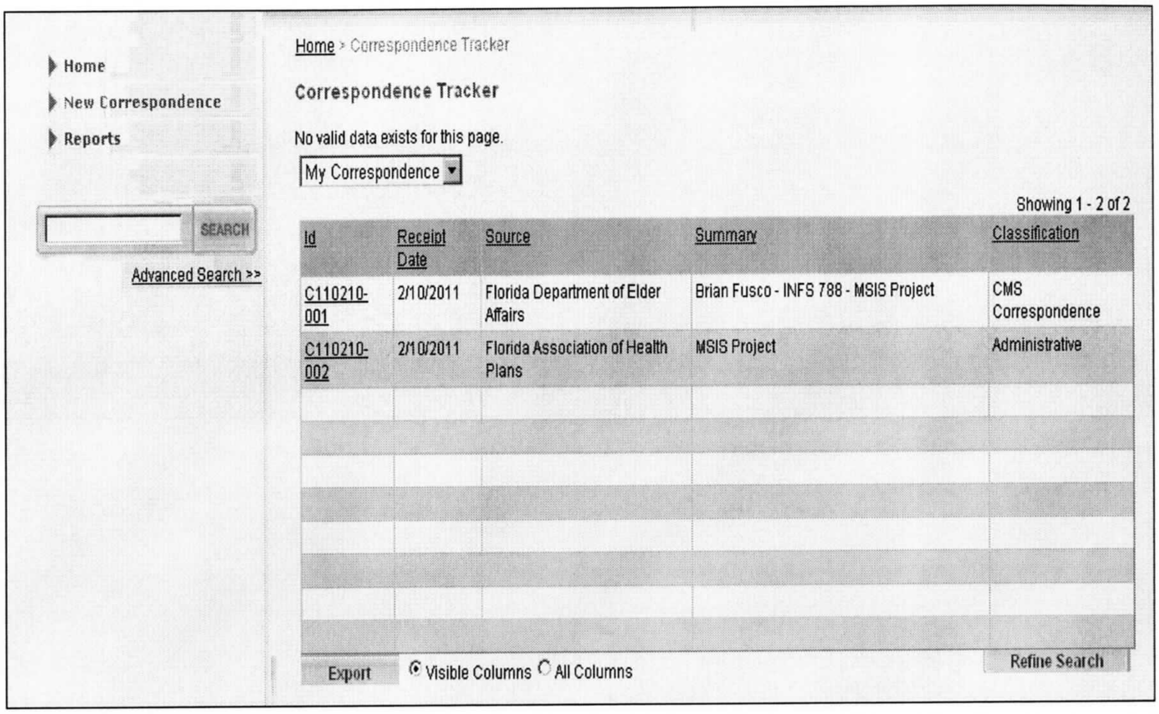
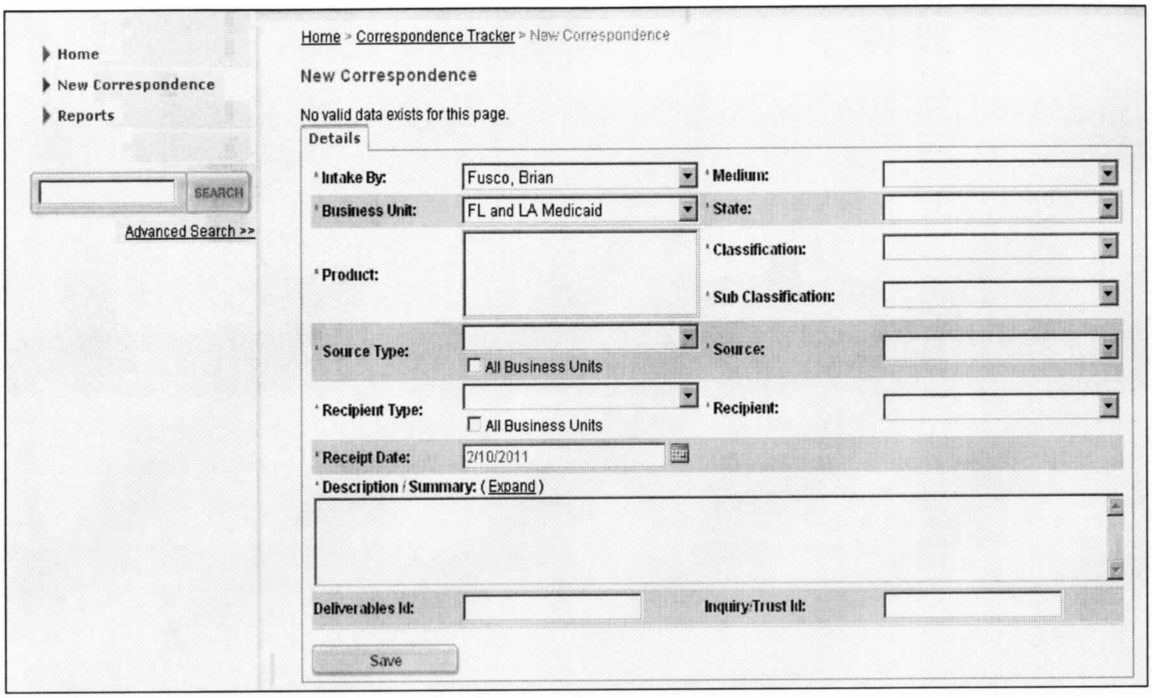


Figure 11: Correspondence Detail Page	
Requirement	Correspondence Detail Page
Description	The Correspondence Details page will allow the user to create detail information pertaining to a correspondence.



Field	Type	Comments
Receipt Date	Date	**Receipt Date** Auto Populated with current date. The date the correspondence was received by WellCare. A calendar icon is available to choose a date. Receipt Date field is unprotected and required.
Business Unit	Dropdown	**Business Unit** Dropdown will list available Business Units. Business Unit field is unprotected and required.
State	Dropdown	**State** Dropdown will list the States. The user will select a State from the dropdown list box. State dropdown is dependent on the Business Unit selected. State is a required field
Medium	Dropdown	**Correspondence Medium** Dropdown will list the types of correspondence. Letter, Email, Phone, Voice mail, Fax and Other. Correspondence Medium is a required field.*
Intake By	Dropdown	**Intake By** Auto Populated with the user signed on to the LIONS Correspondence Tracker Module. This dropdown will list the "active" authorized users defined to CTM. The user can change the name by selecting a name from the dropdown. Intake By is a required field
Intake Date	Date	**Intake Date** Auto Populated with current date. The date the correspondence was entered into the Correspondence Tracker module. Intake Date field is protected.
Regulator	Dropdown	**Regulator** Dropdown will list the regulatory agencies dependent on the State selected. The user will select a regulatory agency from the dropdown list box. Regulator is a required field
Regulatory No.	Text	**Regulator No.** is a text field. Regulator is an optional field.
LOB	Dropdown	**LOB** Dropdown will list lines of business dependent on the State selected. The user will select a LOB from this dropdown list box. LOB is a required field
Category	Dropdown	
Classification	Dropdown	**Classification** Dropdown will list types of correspondence. The user will select a classification. Classification is a required
Description/ Summary	Text	**Description / Summary** Description / Summary freeform entry. Description / Summary is an optional field.

Figure 12: Correspondence Attachments Page	
Requirement	Correspondence Attachments Page
Description	The Correspondence Attachments page will allow the user to upload attachments per each correspondence. Correspondence attachments will be stored outside the website root directory in a folder named "Correspondence Attachments"

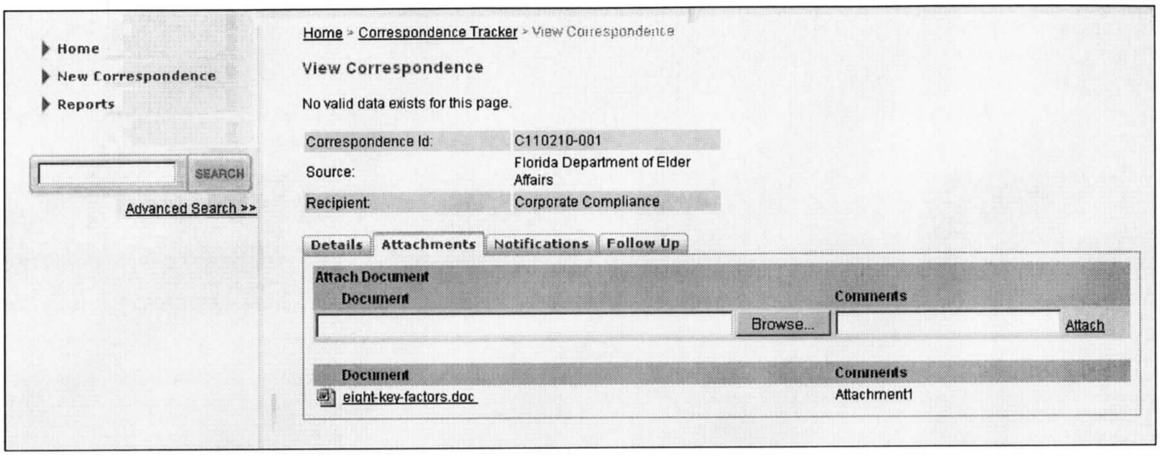


Figure 13: Correspondence Notifications Page	
Requirement	Correspondence Notifications Page
Description	The Correspondence Notifications page will provide notification functionality. The system will not limit the number of notifications. A user can generate and send one or more notifications to the same user for a correspondence.

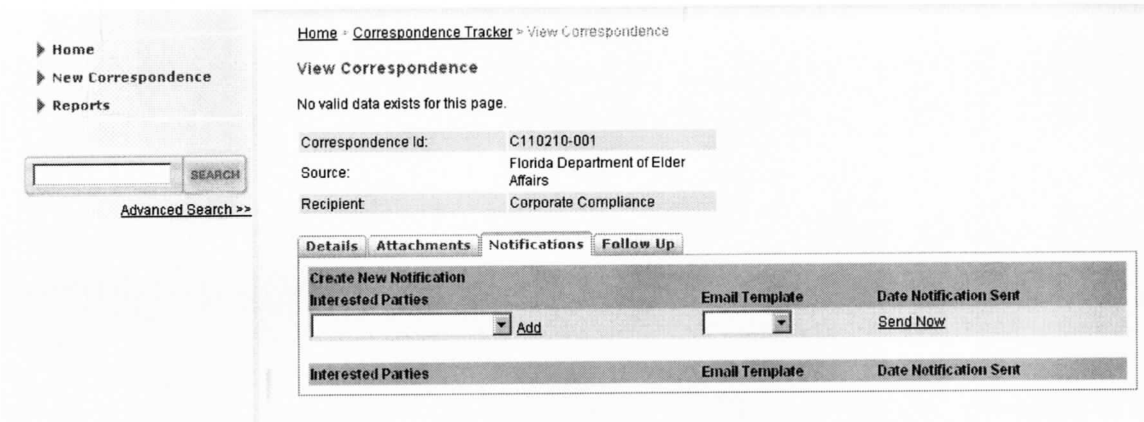
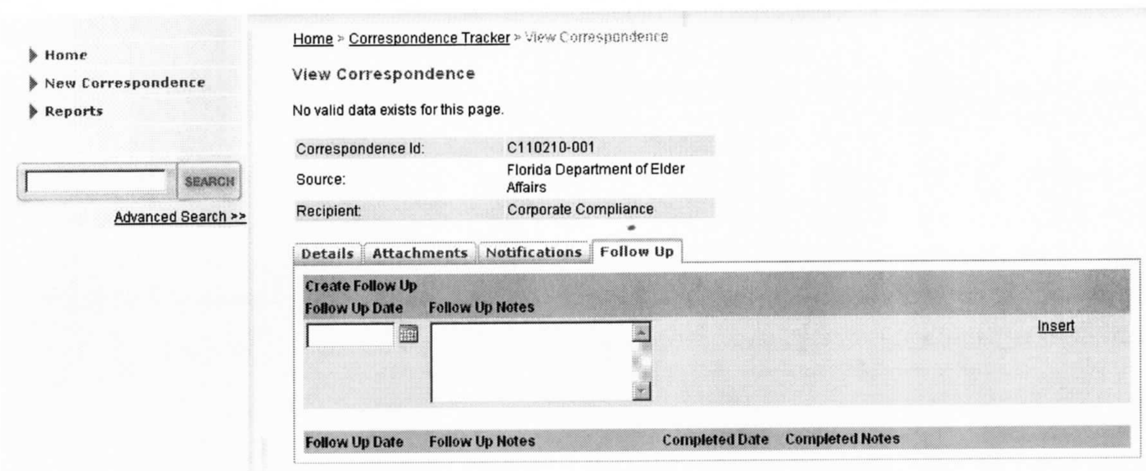


Figure 14: Correspondence Follow-Up Page	
Requirement	Correspondence Follow-Up Page.
Description	The Correspondence Follow-Up page will allow the user to create multiple follow up records per correspondence.

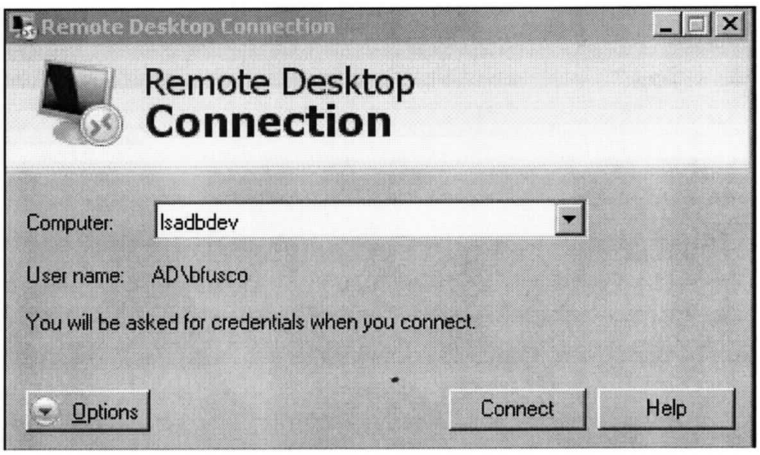


CHAPTER 4

CASE STUDY (RESULTS AND DISCUSSION)

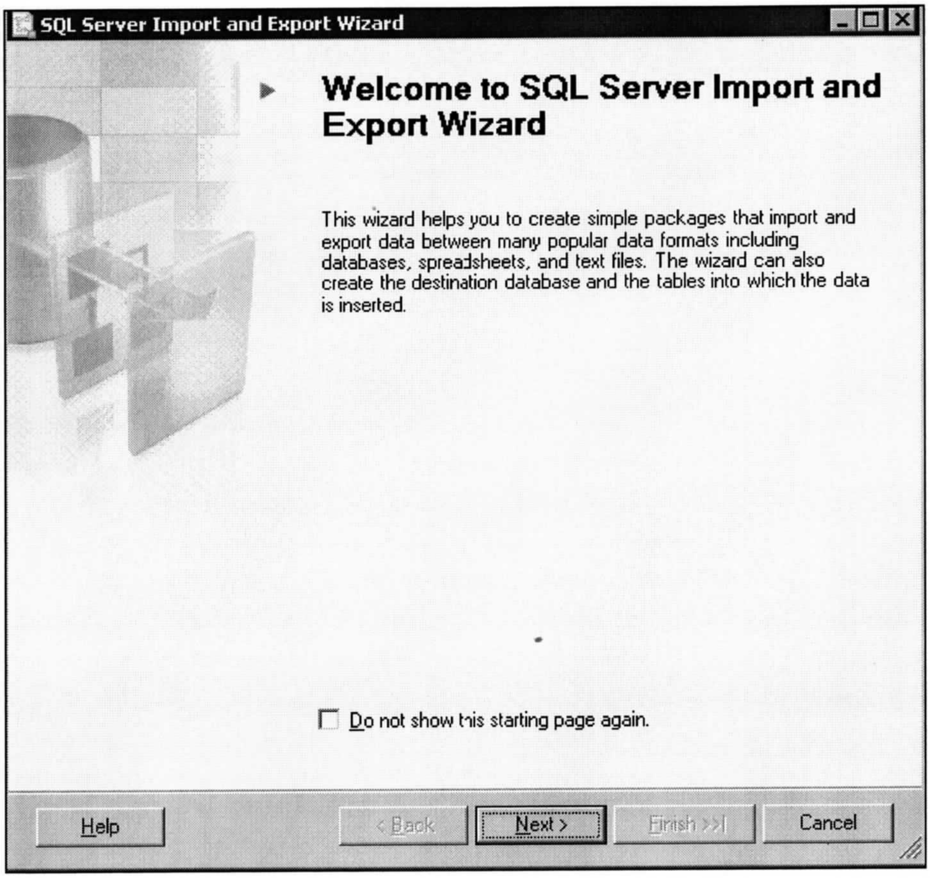
The Correspondence Module project used remote desktop connection to access the development and production servers. Access to remote in was granted on each server.

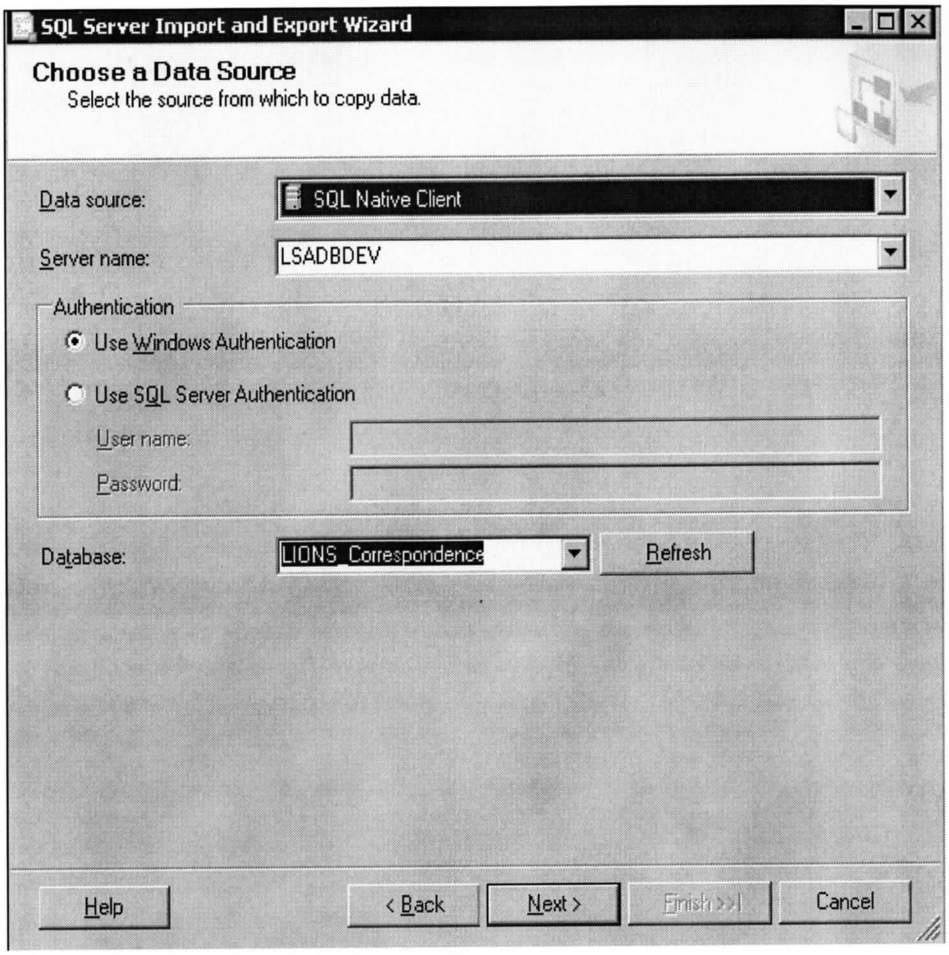
Figure 15: Remote Desktop Connection	
Description	Remote Desktop Connection was used to access the servers for the Correspondence Module project.
Servers	LSAPPDEV, LSADBDEV, LSAAPP, LSADB

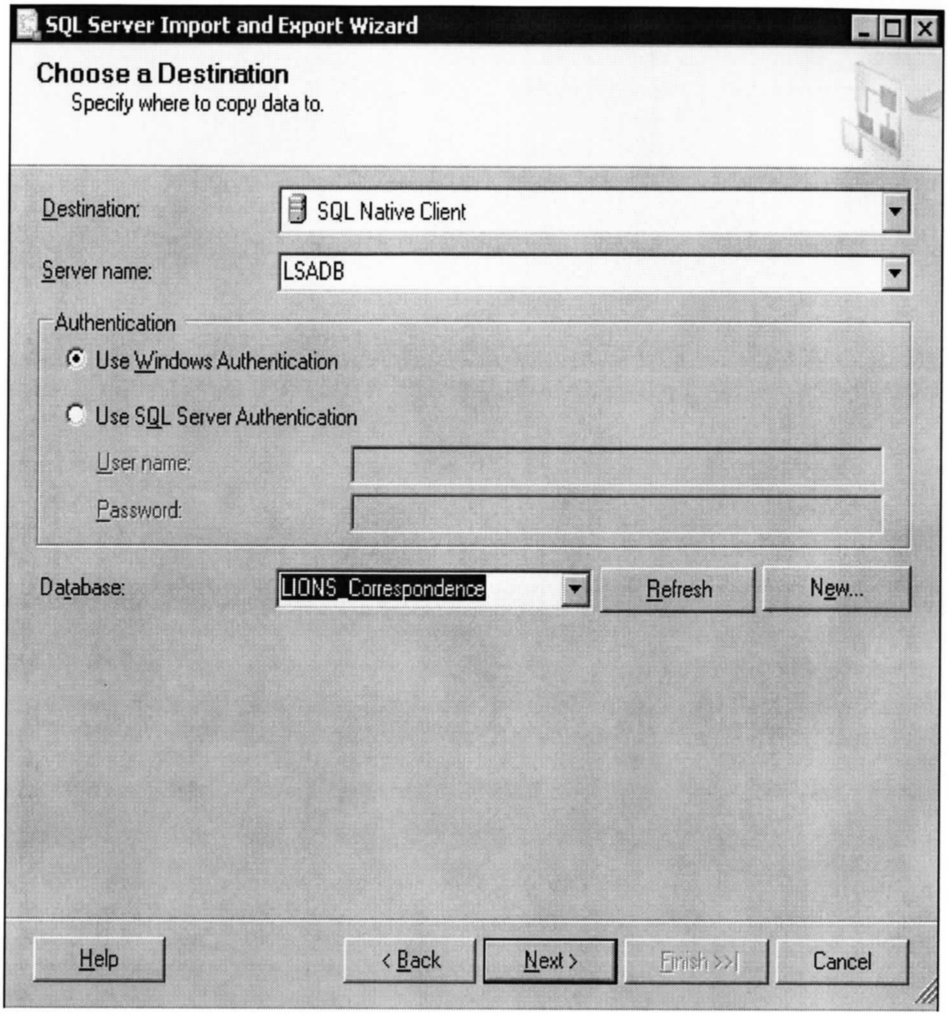


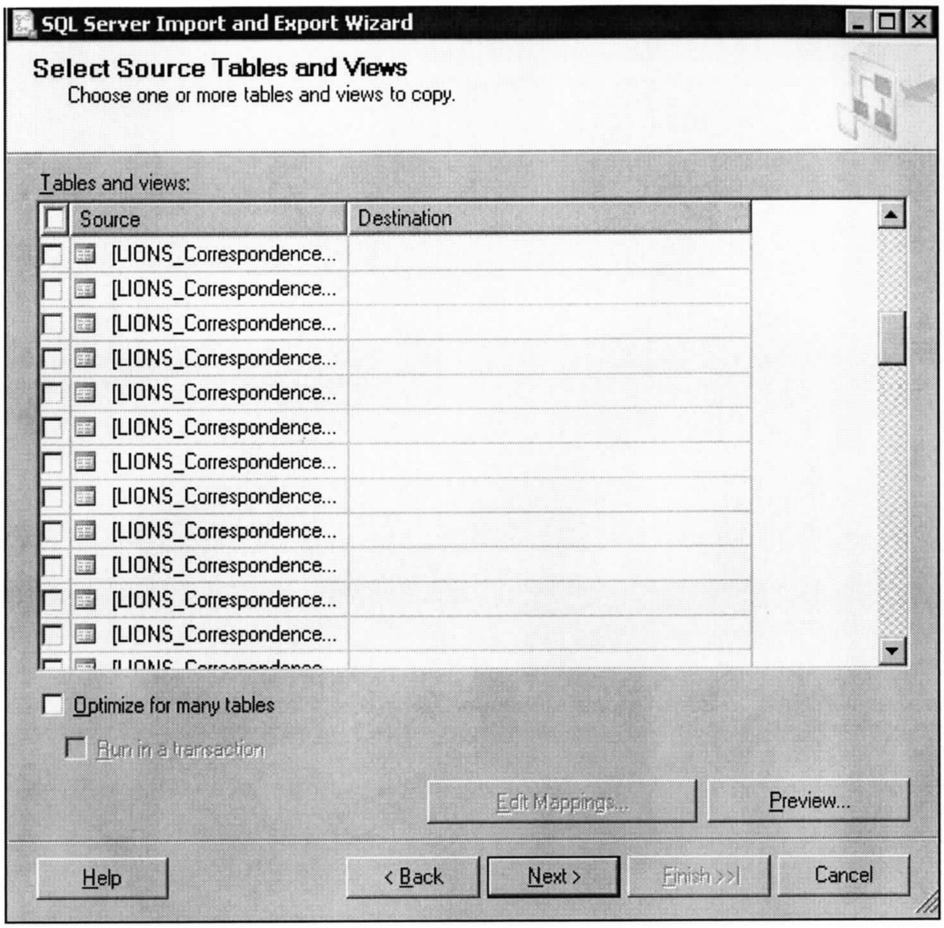
The Correspondence Module project used the Sql Server Import and Export Wizard to export the tables and lookup data that was developed in the development environment to the production environment. Admin access was granted on servers, LSADBDEV and LSADB.

Figure 16: Sql Server Import and Export Wizard	
Description	The Sql Server Import and Export Wizard was used to export the table structures and any lookup data from the development environment to the production environment.
Servers	LSADBDEV, LSADB




SQL Server Import and Export Wizard
Choose a Data Source
Select the source from which to copy data.
Data source:
SQL Native Client
Server name:
LSADBDEV
Authentication
Use Windows Authentication
Use SQL Server Authentication
User name:
Password:
Database:
LIONS_Correspondence
Refresh
Help
< Back
Next >
Finish >>|
Cancel


SQL Server Import and Export Wizard
Choose a Destination
Specify where to copy data to.
Destination:
SQL Native Client
Server name:
LSADB
Authentication
Use Windows Authentication
Use SQL Server Authentication
User name:
Password:
Database:
LIONS_Correspondence
Refresh
New...
Help
< Back
Next >
Finish >>|
Cancel


SQL Server Import and Export Wizard
Select Source Tables and Views
Choose one or more tables and views to copy.
Tables and views:
Source
Destination
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
[LIONS_Correspondence...
Optimize for many tables
Run in a transaction
Edit Mappings...
Preview...
Help
< Back
Next >
Finish >>|
Cancel

CHAPTER 5

CONCLUSIONS

The project was developed to provide WellCare Health Plans, Inc. with a central repository for storing, tracking and notifying authorized users of correspondence with agencies and internal sources.

Correspondence is entered in the Correspondence Module using the developed user interfaces. These correspondences are stored in the Correspondence database on a WellCare secured server. Correspondence is tracked in the Correspondence Module using various developed user interfaces. The Correspondence Module notifies authorized users of entered correspondence by email using the developed user interface.

Future enhancements to the Correspondence Module will be specific to reporting. Cognos Report Studio and Framework will be used to report on the data in the Correspondence Module.

The Correspondence Module project was a success according to management sponsors. The objectives were met and the project stayed within scope and budget.

REFERENCES

Connolly, Thomas & Begg, Carolyn (2005), ***Web Technology and DBMS A Practical Approach to Design, Implementation, and Management***. Chapter 29

Groth, Robert (1999) ***Data Mining Building Competitive Advantage.***

Henkel, Shri (2007), ***How to Plan, Prepare, and Execute Top-Notch Business Meetings.*** .Chapter 4 Initial Planning For Your Meeting, Chapter 7 Effective Ways to Start your Meeting

Hoffer, Jeffrey , Prescott, Mary & Topi, Heikki (2009), Modeling Data in the Organization, ***Modern Database Management.*** Chapter 3, 8, 11

Leffingwell, Dean & Widrig, Don, (2003), Requirements and the Software Lifecycle, The Challenge of Requirements Elicitation, Requirements Workshops, ***Managing Software Requirements.*** Chapter 3, 8, 11

Microsoft Corporation (2001), Microsoft .NET, ***Microsoft .NET Framework FAQ***

Robertson, Suzanne & Robertson James (1999), Project Blastoff, ***Mastering the Requirements Process.*** Chapter 3

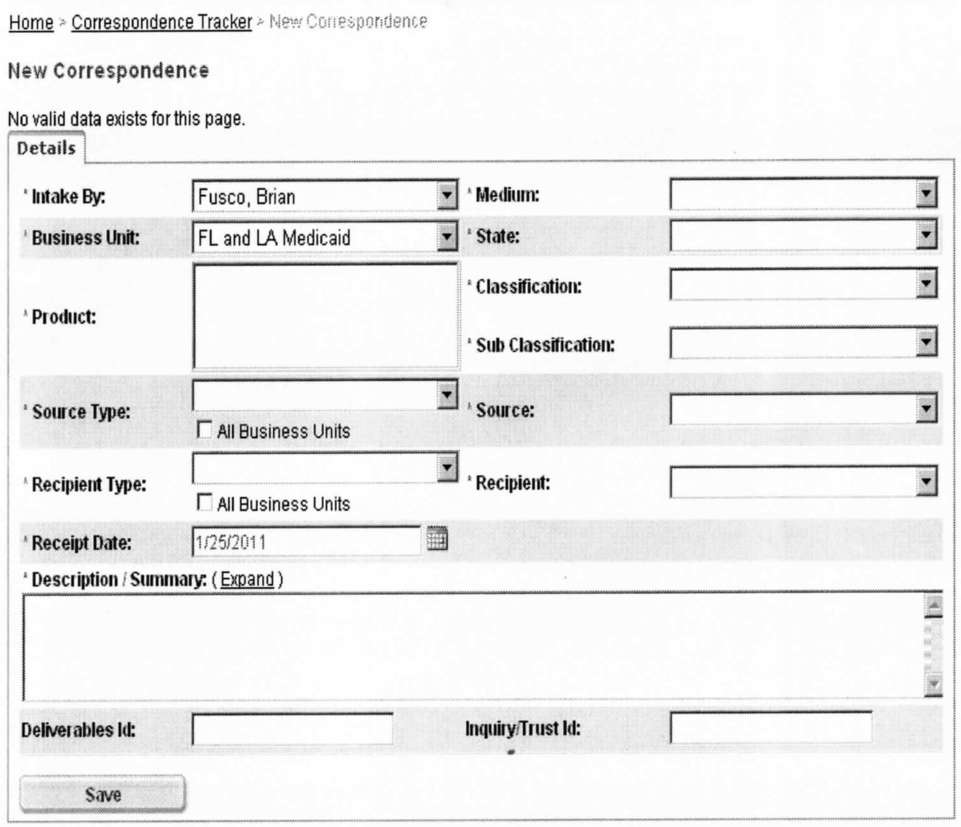
Stahl, Jason (2006), ***Smart Business Detroit Health Care and Data Mining.***

Terry Felke-Morros (2007), ***Web Development & Design Foundations with XHTML.*** Chapter 7

APPENDICES

APPENDIX A: USERS' MANUAL

NEW CORRESPONDENCE PAGE



The New Correspondence Page will allow the user to create detail information pertaining to a correspondence.

1. Intake By is auto populated with the name of the user signed on to the Correspondence Module. Click on to display all active authorized users defined in the Correspondence Module.

2. Medium dropdown will list the available types of correspondence for user selection. Medium is a required field. Click on to display the available mediums.

3. Business Unit dropdown will list the available Business Units for user selection. Business Unit is auto populated with the business unit of the user signed on to the Correspondence Module. Business Unit is a required field. Click on to display all available business units.

4. State dropdown will list the states within a business unit for user selection. Entries in this dropdown are dependent on the business unit selected in. State is a required field. Click on to display all available states within the selected business unit.

5. Product list box will list the products available for the Business Unit selected in and the State selected in. Product is a required field. Multiple products can be selected by holding down the [shift] key and selecting the product(s).

6. Classification dropdown will list the available classifications. Classification is a required field. Click on to display the available classifications.

7. Sub Classification dropdown will list the available sub classifications for a classification. Entries in this dropdown are dependent on the classification selected in. Sub Classification is a required field. Click on to display all available sub classifications for the selected classification.

8. Source Type dropdown will list the available source types for user selection. Source Type is a required field. Click on to display the available source types.

9. Use the ☐ All Business Units checkbox to list all Source options regardless of Business Unit, State and Source Type.

10. Source dropdown will list the available sources for a Business Unit, State and Source Type. Source Type is a required field. Click on to display the available sources for the selected Business Unit, State and Source Type combination.

11. Recipient Type dropdown will list the available recipient types for user selection. Recipient Type is a required field. Click on to display the available recipient types.

12. Use the ☐ All Business Units checkbox to list all Recipients regardless of Business Unit, State and Recipient Type.

13. Recipient dropdown will list the available recipients for a Business Unit, State and Recipient Type. Recipient Type is a required field. Click on to display the available sources for the chosen Business Unit, State and Recipient Type combination.

14. Receipt Date is auto populated with the system current date. Receipt date is the date the correspondence was received by WellCare and is a required field. Change the receipt date by entering a valid date in mm/dd/yyyy format or by clicking on the calendar icon to display the calendar. Select a date from the calendar by clicking on the date.

15. Description / Summary textbox is a freeform entry field. Description / Summary is a required field. Click on (Expand) to expand the textbox. Click on (Collapse) to return the textbox to the original size.

17. Click on the Save button to save the detail information for this correspondence.

18. Click on ▶ Home to display the Correspondence Home Page.

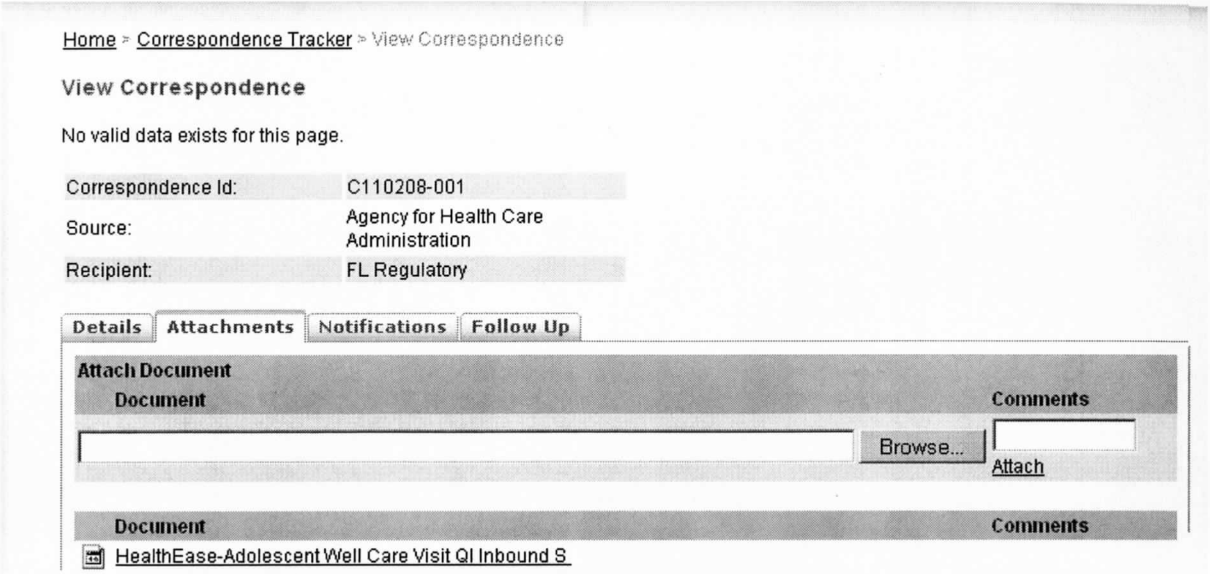
19. Click on ▶ New Correspondence to display the New Correspondence Page.

20. Click on ▶ Reports to display the Correspondence Reporting Page.

21. SEARCH The Simple Search feature will allow the user to quickly search for Correspondence.

22. Click on Log Out to logout of the Correspondence Module.

ATTACHMENTS PAGE



The Attachments Page will allow the user to add attachments to the correspondence details.

1. Correspondence ID: The correspondence that attachments will be associated with.

2. Source: Source for this correspondence.

3. Recipient: Recipient for this correspondence.

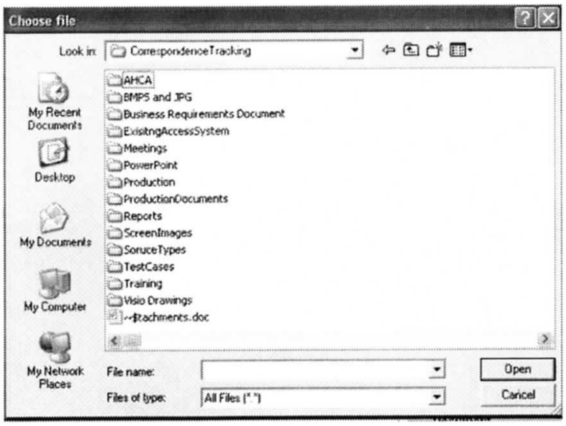
4. Click on the Details tab to display the Correspondence Details.

5. The Attachments tab is current and will allow the user to add attachments to this Correspondence.

6. Click on the Notifications tab to view Notification information for this Correspondence.

7. Click on the Follow Up tab to view Follow Up information for this Correspondence.

8. Click on the Browse... button to display the file section window to navigate to the attachment.



9. The file path and name will be displayed in this textbox.

10. Enter any comments pertaining to this attachment. Comments are optional.

11. Click Attach to attach the file selected to the Correspondence.

12. The name of the attached document will display with the icon representing the file type, e.g. Word, Excel, and PowerPoint.

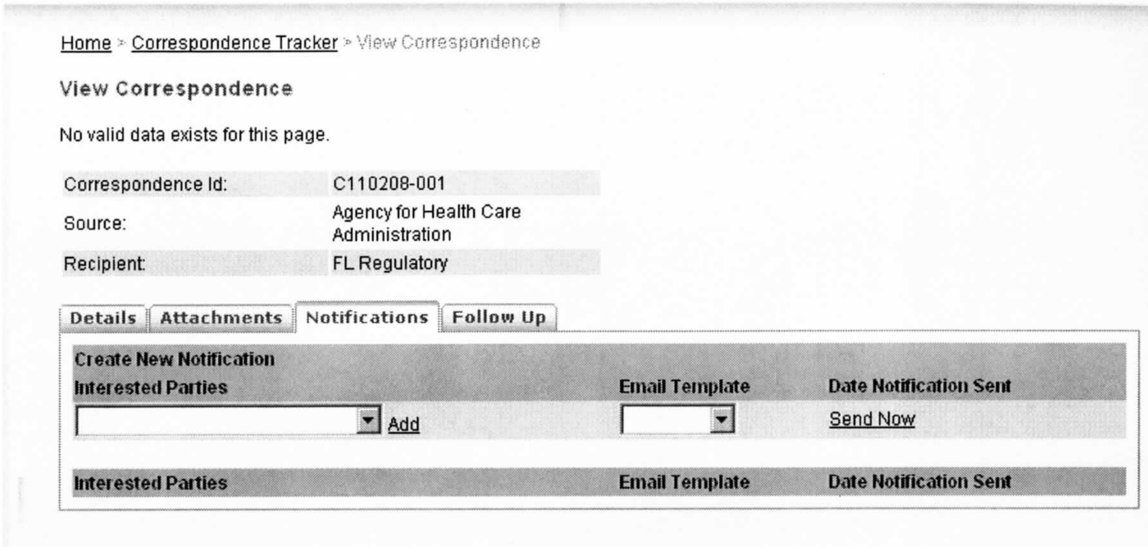
13. The comments will display for this attachment.

14. Click on ▶ New Correspondence to display the New Correspondence Page.

15. Click on ▶ Reports to display the Correspondence Reporting

16. The Simple Search feature will allow the user to quickly search.

NOTIFICATIONS PAGE



The Notifications Page will allow the user to notify users for a Correspondence.

1. Correspondence ID: The correspondence that attachments will be associated with.

2. Source: Source for this correspondence.

3. Recipient: Recipient for this correspondence.

4. Click on the Details tab to display the Correspondence Details.

5. Click on the Attachments tab to display attachments for this Correspondence.

6. The Notifications tab is current and will allow the user to add notifications for this Correspondence.

7. Click on the Follow Up tab to view Follow Up information for this Correspondence.

8. Click on Add to add the interested parties in **9.** to be notified.

9. This dropdown will list authorized users in the correspondence that can be notified.

10. This dropdown will list the available email templates.

11. Click Send Now to send the notification to the selected users immediately.

12. Interested Parties is the user notified.

13. Email Template is the email template used for a notification.

14. Date Notification sent is the date and time the notification was sent.

15. Click on ▶ Home to display the Correspondence Home Page.

16. Click on ▶ New Correspondence to display the New Correspondence Page.

17. Click on ▶ Reports to display the Correspondence Reporting Page.

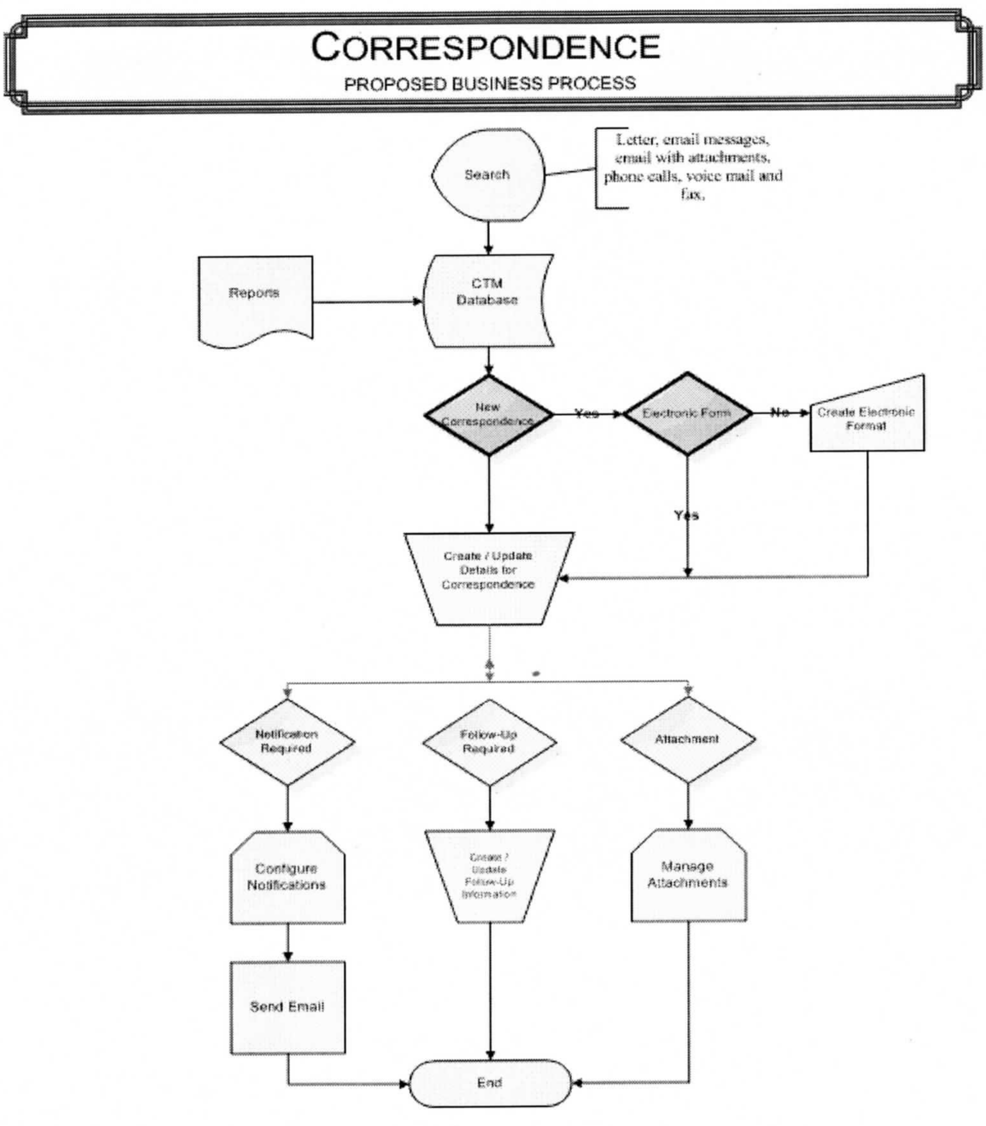
18. SEARCH The Simple Search feature will allow the user to quickly search for Correspondence by;

1. Correspondence ID
2. Description / Summary
3. Follow Up Notes
4. Follow Up Completed Notes
5. Attachment File Name
6. Attachment Comments

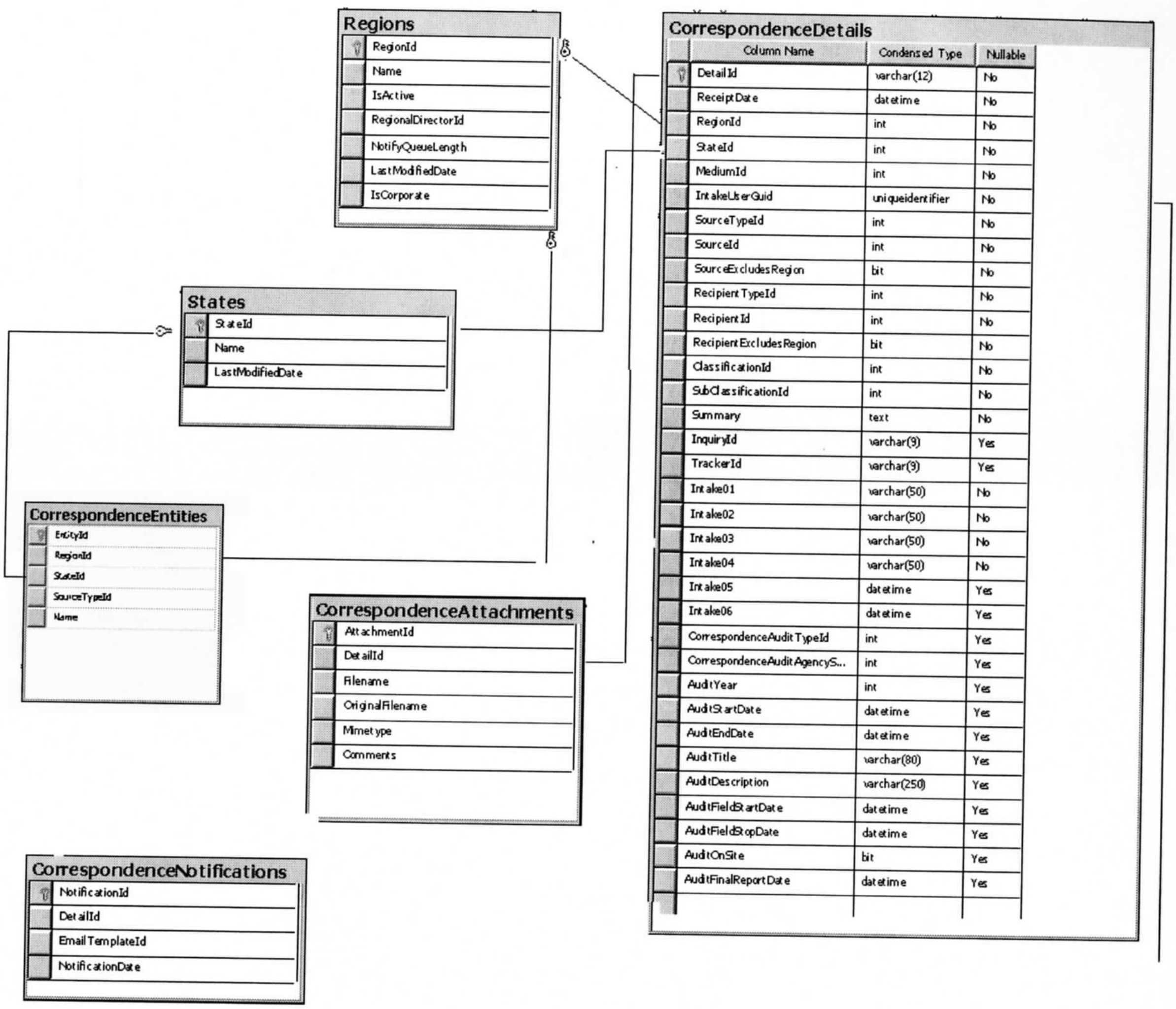
APPENDIX B: SYSTEM TECHNICAL DOCUMENTATION

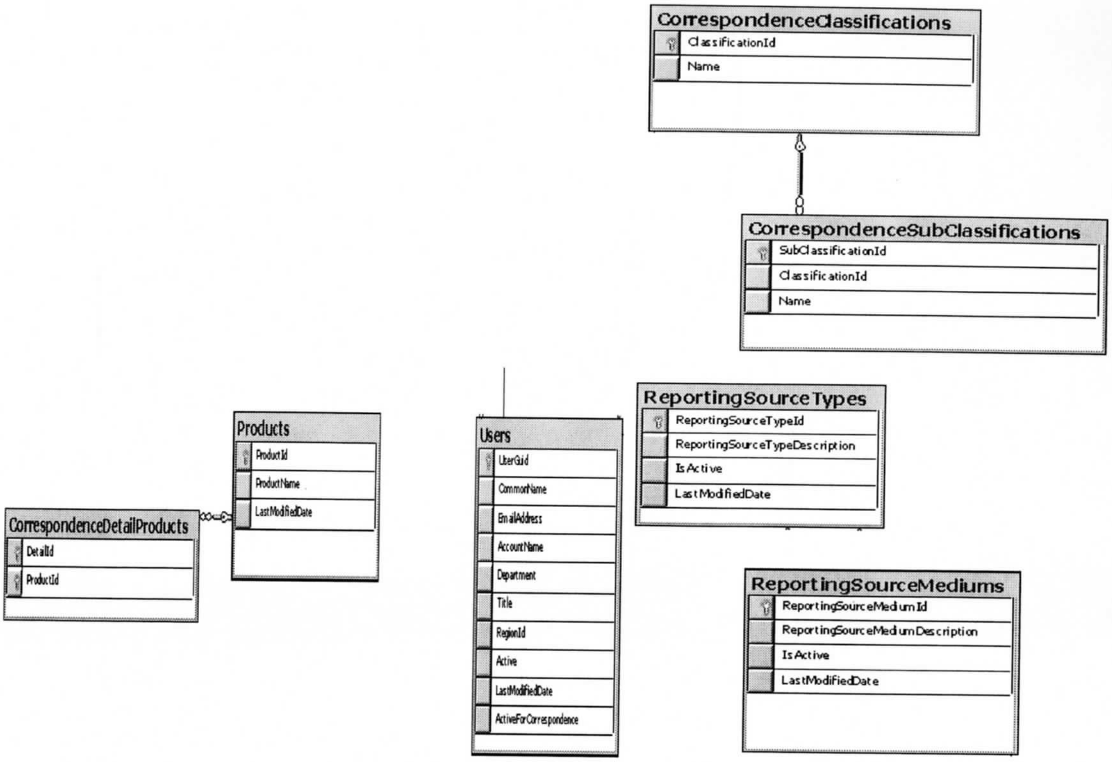
PROPOSED BUSINESS PROCESS

The Proposed Business Process was the high level diagram used during requirement gathering sessions.

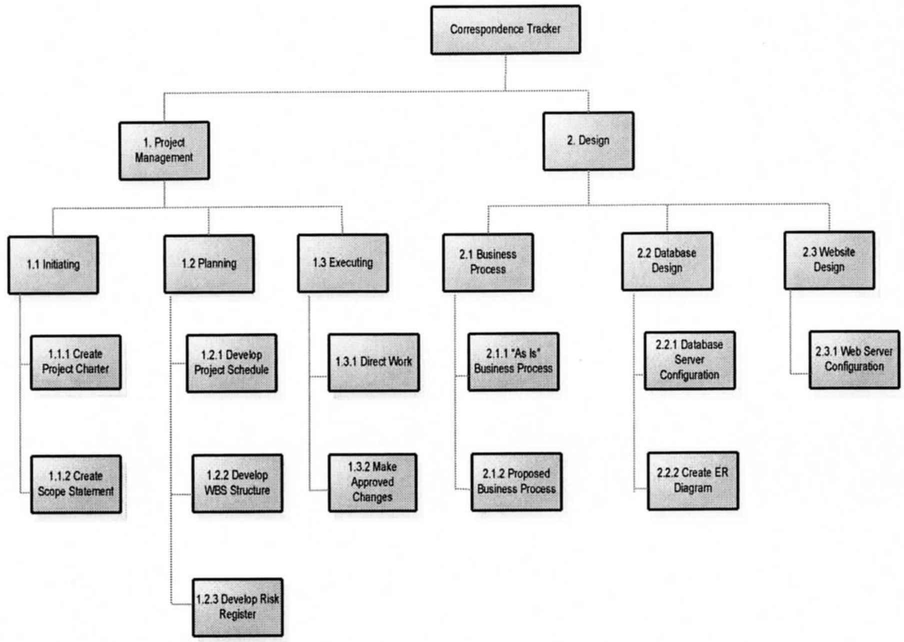


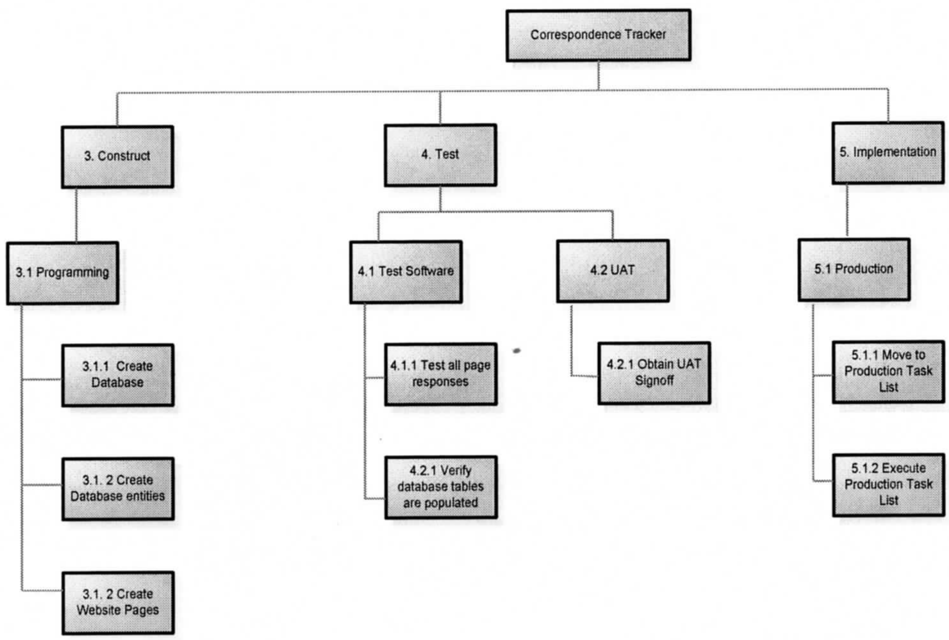
CORRESPONDENCE ER-MODEL




CorrespondenceClassifications
ClassificationId
Name
CorrespondenceSubClassifications
SubClassificationId
ClassificationId
Name
Products
ProductId
ProductName
LastModifiedDate
CorrespondenceDetailProducts
DetailId
ProductId
Users
UserGuid
CommonName
EmailAddress
AccountName
Department
Title
RegionId
Active
LastModifiedDate
ActiveForCorrespondence
ReportingSourceTypes
ReportingSourceTypeId
ReportingSourceTypeDescription
IsActive
LastModifiedDate
ReportingSourceMediums
ReportingSourceMediumId
ReportingSourceMediumDescription
IsActive
LastModifiedDate

WORK BREAKDOWN STRUCTURE





PROJECT SCHEDULE

Correspondence Tracker Module - Project Schedule		
Task	**Start Date**	**End Date**
1. Project Management	9/10/2010	3/20/2011
1.1 Initiating	9/10/2010	9/30/2010
1.1.1 Create Project Charter	9/15/2010	9/30/2010
1.1.2 Create Scope Statement	9/15/2010	9/30/2010
1.2 Planning	9/15/2010	10/31/2010
1.2.1 Develop Project Schedule	9/15/2010	10/15/2010
1.2.2 Develop WBS Structure	9/15/2010	10/15/2010
1.2.3 Develop Risk Register	10/15/2010	10/31/2010
1.3 Executing	9/15/2010	3/16/2011
1.3.1 Direct Work	9/15/2010	3/16/2011
1.3.2 Make Approved Changes	3/16/2011	3/20/2011
2.2 Database Design	11/1/2010	11/15/2010
2.2.1 Database Server Configuration	11/1/2010	11/15/2010
2.2.2 Create ER Diagram	10/1/2010	10/15/2010
2.3 WebSite Design	11/1/2010	12/15/2010
2.3.1 Web Server Configuration	11/1/2010	12/15/2010
2.1 Business Process	10/1/2010	10/15/2010
2.1.1 "As Is" Business Process	10/1/2010	10/10/2010
2.1.2 Proposed Business Process	10/10/2010	10/15/2010
3. Construct		
3.1 Programming	1/10/2011	3/10/2011
3.1.1 Create Database	1/10/2011	1/12/2011
3.1.2 Create Database Entities	1/12/2011	1/15/2011
3.1.3 Create Website Pages	1/15/2011	2/10/2011
4. Test	2/10/2011	3/5/2011
4.1 Test Software	2/10/2011	3/5/2011
4.1.1 Test all Page Responses	2/10/2011	2/20/2011
4.1.2 Verify Database tables are populated	2/10/2011	2/20/2011
4.2 UAT	2/21/2011	3/5/2011
4.2.1 Obtain UAT Signoff	3/5/2011	3/5/2011
5. Implementation	3/10/2011	3/16/2011
5.1. Production	3/10/2011	3/16/2011
5.1.1 Move to Production Task List	2/10/2011	2/15/2011
5.1.2 Execute Production Task List	3/15/2011	3/16/2011

MSIS PROJECT PRESENTATION POWERPOINT

MSIS Project

Correspondence Module

by
Brian Fusco

Project Committee
Dr. Rick Christoph
Dr. Stephen Krebsbach
Michael Dayton

Presentation Outline

- WellCare Health Plans, Inc.
- Business Problem
- What is a Correspondence?
- Why a new system?
  - Purpose
  - Advantage
- System Highlights
- Correspondence Module Demonstration

2

WellCare Health Plans, Inc.

- Provides managed care services exclusively for government-sponsored health care programs focusing on Medicare and Medicaid.
- A 2008 Fortune 500 Company headquartered in Tampa, Florida
- 3,800 associates and services nearly 2.2 million members nationwide as of March 31, 2010.

Business Problem

- WellCare has no central repository for storing, tracking, and retrieving regulatory correspondence.
- Manual tracking of correspondence is inefficient and inadequate in providing the organization with the ability to search and retrieve correspondence in a timely manner.

Definition

- ***Correspondence***
  - Complaints, Inquiries or Information received from and to external regulatory agencies.
  - Letter, email message, email attachment, phone call, voice mail, fax and other medium.

Purpose

- Provide WellCare with a central repository for storing, retrieving and tracking incoming and outgoing correspondence with regulatory agencies.
- Provide notifications to interested parties.

Advantage

- Provide corporate oversight of all correspondence.
- Assist in meeting compliance goals in line with our core value to deliver excellent service to our internal and external partners.

System Highlights

- Home Page
- New Correspondence Page
  - Attachments Page
  - Notifications Page
  - Follow Up Page
- Search Facility
  - Simple Search
  - Advanced Search Facility
- Reports
- Export
- Security Roles

System Demonstration

9